

## **Executive Summary**

Coastal waters in the United States include estuaries, coastal wetlands, coral reefs, mangrove forests, and upwelling areas. Critical coastal habitats provide spawning grounds, nurseries, shelter and food for finfish, shellfish, birds, and other wildlife. Our coastal resources also provide nesting, resting, feeding, and breeding habitat for 85% of waterfowl and other migratory birds. Estuaries are bodies of water that provide transition zones between fresh water from rivers and the saline environment of the ocean. This interaction produces a unique environment that supports wildlife and fisheries and contributes substantially to the economy of the United States.

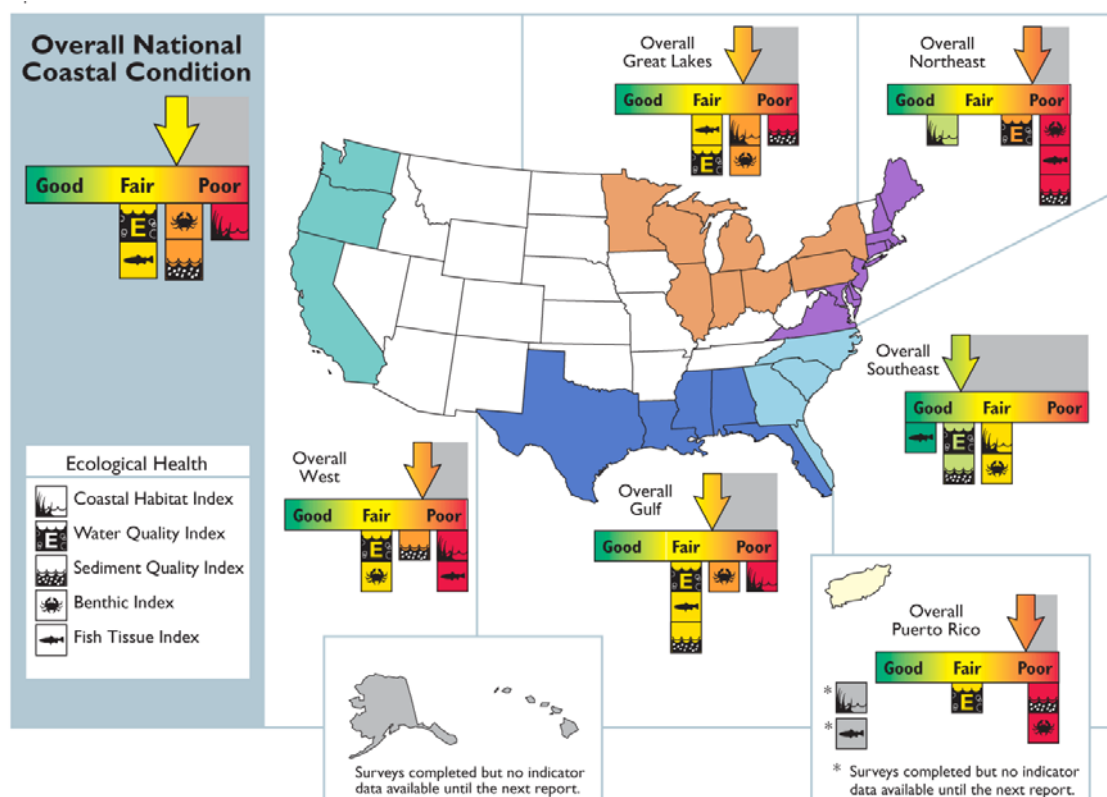
Section 305(b) of the Clean Water Act requires that the U.S. Environmental Protection Agency (EPA) report periodically on the condition of the nation's waters. As part of this process, coastal states provide valuable information about the condition of their coastal resources to EPA. However, the individual states use a variety of approaches for data collection and evaluation, making it difficult to compare this information between states, or on a national basis. To better address questions about national coastal condition, the EPA, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Interior (DOI), and U.S. Department of Agriculture (USDA) agreed to participate in a multiagency effort to assess the condition of the nation's coastal resources (U.S. EPA, 1998). The agencies chose to assess condition using a few nationally consistent monitoring surveys in order to minimize the problems created by trying to compile data that were collected using multiple approaches. The results of these assessments are compiled periodically into a National Coastal Condition Report.

The first National Coastal Condition Report (NCCR I), published in 2001, reported that the nation's estuarine resources were in fair condition. The NCCR I used available data from 1990 to 1996 to characterize about 70% of the nation's estuarine resources. Agencies contributing these data included EPA, NOAA, DOI's Fish and Wildlife Service (FWS), and USDA. This second National Coastal Condition Report (NCCR II) is based on available data from 1997 to 2000. These data are representative of 100% of estuarine acreage in the conterminous 48 states and Puerto Rico, and they show that the nation's estuaries continue to be in fair condition. Agencies contributing data to this report include EPA, NOAA, FWS, and the United States Geological Survey (USGS). Several state and regional/local organizations also provided information on the current condition of the nation's coasts.

With each National Coastal Condition Report, the collaborating agencies are striving to provide a more comprehensive picture of the nation's coastal resources. The NCCR II builds on the foundation provided by the NCCR I, and efforts are under way to assess even more areas using comparable and consistent methods. Although the NCCR II provides some condition data for Alaska, Hawaii, U.S. island commonwealths and territories, and the Great Lakes, these data are not comparable with data provided for other regions; however, current monitoring efforts in Alaska, Hawaii, and the island commonwealths and territories will allow comparisons in future National Coastal Condition Reports.

The NCCR II presents three main types of data: (1) coastal monitoring data, (2) offshore fisheries data, and (3) assessment and advisory data. The ratings of coastal condition in the report are based primarily on coastal monitoring data because these data are the most comprehensive and nationally consistent data available related to coastal condition. One source of comprehensive and nationally consistent coastal monitoring data is EPA's National Coastal Assessment (NCA) program, which provides information on the condition of coastal estuaries for most regions of the United States. The NCCR II relies heavily on NCA estuarine data in assessing coastal condition and uses NCA and other data to evaluate five indicators of condition—water quality, coastal habitat loss, sediment quality, benthic community condition, and fish tissue contaminants—in each region of the United States (Northeast Coast, Southeast Coast, Gulf Coast, West Coast, Great Lakes, and Puerto Rico). The resulting ratings for each indicator are then used to calculate both overall regional ratings and an overall national rating of coastal condition. This national assessment applies to 28 coastal states (20 ocean states, 6 Great Lakes states, and 2 ocean/Great Lakes states) and Puerto Rico (Figure ES-1).

In addition to rating coastal condition based on coastal monitoring data, the NCCR II summarizes available information related to offshore fisheries and beach advisories and closures. This information, together with descriptions of individual monitoring programs, paints a picture of the overall condition of coastal resources in the United States.



**Figure ES-1.** Overall national coastal condition based on results of the NCA, the Great Lakes State of the Lakes Ecosystem Conference (SOLEC) program, and FWS's National Wetland Inventory (1997–2000).

## Summary of the Findings

This report is based on the large amount of monitoring data collected between 1997 and 2000 on the condition of the estuarine and Great Lakes resources of the United States. Ecological assessment of these data shows that the nation's estuaries are in fair condition, with poor conditions in the Northeast Coast and Puerto Rico regions and fair conditions in the Southeast Coast, Gulf Coast, Great Lakes, and West Coast regions. No overall assessments were completed of Alaska, Hawaii, Guam, American Samoa, the Northern Mariana Islands, or the U.S. Virgin Islands, although surveys of Alaska and Hawaii have been completed, samples are being analyzed, and data will be available in 2004. New ecological monitoring programs will permit a comprehensive and consistent assessment of all of the nation's coastal resources by 2006.

The major findings of the 1997–2000 study period are as follows:

- Overall condition of the nation's estuaries is fair. This rating is based on five indicators of ecological condition: water quality index (including dissolved oxygen, chlorophyll *a*, nitrogen, phosphorus, and water clarity), sediment quality index (including sediment toxicity, sediment contaminants, and sediment total organic carbon [TOC]), benthic index, coastal habitat index, and a fish tissue contaminants index.
- Twenty-one percent of assessed resources are unimpaired (good condition), whereas 35% are impaired (poor condition) and 44% are threatened (fair condition) for aquatic life use or human use.
- Twenty-three percent of estuarine waters are impaired for swimming, based on the water clarity data presented in this report. Water clarity represents the aesthetic component of this human use. The suitability of estuarine waters for swimming is best measured using microbial measures, which are not included in this report.
- Twenty-two percent of estuarine waters are impaired for fishing, based on the risk-based noncancer guidelines for moderate consumption. Suitability of waters for fishing is measured using the fish tissue contaminants index in this report.
- Twenty-eight percent of estuarine waters are impaired for aquatic life use. Suitability of waters for aquatic life use is measured using the water quality, sediment quality, habitat loss, and benthic indices in this report.
- The indicators that show the poorest condition throughout the United States are coastal habitat condition, sediment quality, and benthic condition. The indicators that generally show the best condition are the individual components of water quality—dissolved oxygen and dissolved inorganic nitrogen.

Table ES-1 provides the rating scores for each indicator, and Table ES-2 summarizes the estimates of areal degradation by region and nationally.

**Table ES-1.** Rating Scores<sup>a</sup> by Indicator and Region

Indicator	Northeast Coast	Southeast Coast	Gulf Coast	West Coast	Great Lakes	Puerto Rico	United States <sup>b</sup>
Water quality index	2	4	3 <sup>c</sup>	3	3	3	3.0
Sediment quality index	1	4	3	2	1	1	2.1
Coastal habitat index	4	3	1	1	2	— <sup>d</sup>	1.7
Benthic index	1	3	2	3	2	1	2.0
Fish tissue contaminants index	1	5	3	1	3	— <sup>d</sup>	2.7
Overall condition	1.8	3.8	2.4	2.0	2.2	1.7	2.3

<sup>a</sup> Rating scores are based on a 5-point system, where 1 is poor and 5 is good.

<sup>b</sup> The U.S. score is based on an aerially weighted mean of regional scores.

<sup>c</sup> This rating score does not include the impact of the hypoxic zone in offshore Gulf Coast waters.

<sup>d</sup> No wetland loss or fish tissue contaminant results were available for Puerto Rico.

**Table ES-2.** Percent Area in Poor Condition<sup>a</sup> by Indicator (except Coastal Habitat Index) and Region

Indicator	Northeast Coast	Southeast Coast	Gulf Coast	West Coast	Great Lakes	Puerto Rico	United States
Water quality index <sup>b</sup>	19	5	9 <sup>c</sup>	12	—	9	12
Sediment quality index <sup>d</sup>	16	8	12	14	—	61	13
Coastal habitat index <sup>e</sup>	1.00	1.06	1.30	1.90	—	—	1.26
Benthic index	25	11	17	13	—	35	18
Fish tissue contaminants index <sup>f</sup>	31	5	14	27	—	—	22
Overall poor condition <sup>g</sup>	40 <sup>h</sup>	23	40	23	—	77	35

<sup>a</sup> The percent area of poor condition is the percentage of total estuarine surface area in the region or the nation (proportional area information not available for Great Lakes).

<sup>b</sup> The water quality index is based on a combination of water quality measurements (dissolved oxygen, chlorophyll, nitrogen, phosphorus, and water clarity).

<sup>c</sup> The area of poor condition does not include the hypoxic zone in offshore Gulf Coast waters.

<sup>d</sup> The sediment quality index is based on a combination of sediment quality measurements (sediment contaminant concentrations, sediment toxicity, and sediment TOC).

<sup>e</sup> The coastal habitat index is based on the average of the mean long-term, decadal wetland loss (1780–1990) and the present decadal wetland loss rate (1990–2000).

<sup>f</sup> The fish tissue contaminants index is based on analyses of whole fish (not fillets).

<sup>g</sup> The overall percentage is based on the overlap of the five indicators and includes estuarine area for all of the conterminous 48 states (by region and total) and Puerto Rico.

<sup>h</sup> In Northeast Coast estuaries, at least one of the five indicators is rated poor at sites representing 40% of total estuarine area.

## Describing Coastal Condition

Three types of data are presented in this report:

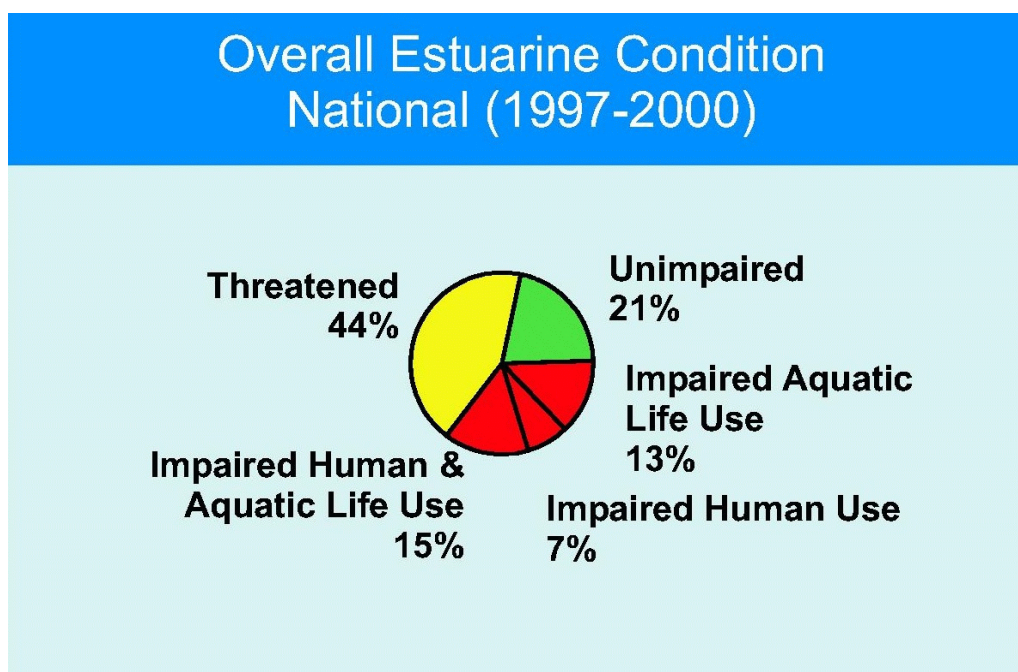
- **Coastal Monitoring Data**—data from programs such as EPA’s Environmental Monitoring and Assessment Program (EMAP) and NCA, NOAA’s National Status and Trends (NS&T) program, and FWS’s National Wetlands Inventory (NWI), as well as Great Lakes information from the State of the Lakes Ecosystem Conference (SOLEC). These data are used in this report to develop indicators of condition, which are then used to calculate regional and national ratings of coastal condition.
- **Offshore Fisheries Data**—data from programs such as NOAA’s Marine Monitoring and Assessment Program (MARMAP) and Southeast Area Monitoring and Assessment Program (SEAMAP). These data are used in this

report to assess the condition of coastal fisheries in large marine ecosystems (LMEs).

- **Assessment and Advisory Data**—data provided by states or other regulatory agencies that are compiled in nationally maintained databases. The agencies contributing data use different methodologies and criteria for assessment, so the data cannot be used to make broad-based comparisons among the different coastal areas. These data provide information about designated use support, which affects public perception of coastal condition as it relates to public health.

## Coastal Monitoring Data

About 21% of the estuarine area in the contiguous 48 states and Puerto Rico is in good condition for supporting aquatic life and human uses (Figure ES-2). About 28% of the estuarine area shows evidence of impaired aquatic life use, and 22% shows evidence of impaired human use. An additional 44% of estuarine waters shows threatened aquatic life and human uses.

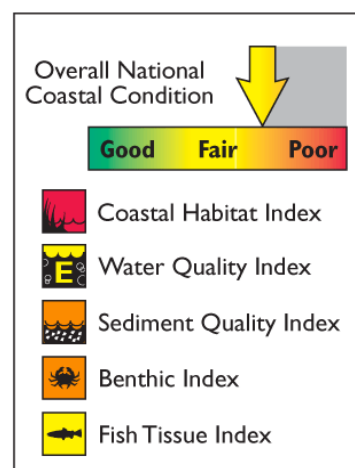


**Figure ES-2.** National estuarine condition (U.S. EPA/NCA).

For EPA, issues regarding coastal condition can often be reduced to three simple questions: Are the waters swimmable? Are the waters fishable? Do the waters support aquatic life? This report can address all three questions.

- **Fishing:** Twenty-two percent of sites sampled for fish in the United States exceed risk-based noncancer guidelines for consumption of four 8-ounce meals per month. An additional 15% of sites show contaminant concentrations within the range of these noncancer guidelines. The suitability of waters for fishing is measured using the fish tissue contaminants index, which received a national rating of fair.
- **Swimming:** Suitability for swimming is best analyzed using a measure of microbial contamination of estuarine waters or sediments. However, the NCA has not been able to develop a microbial indicator that is consistently collected throughout U.S. estuarine waters that can meet all quality assurance requirements. The most applicable indicator measured by the NCA that can be used to address swimming is water clarity (an aesthetic indicator). About 23% of estuarine waters assessed have poor water clarity.
- **Aquatic Life Use:** Based on the water quality index, sediment quality index, and benthic index, and coastal habitat index, 28% of U.S. estuarine surface area is impaired for aquatic life use.

The overall condition of the nation's estuarine waters is fair (Figure ES-3). This rating is based on the combination of the five component indicators: water quality index, sediment quality index, benthic index, coastal habitat index, and fish tissue contaminants index. Supplemental information (e.g., information on water clarity, dissolved oxygen, dissolved inorganic nitrogen [DIN], dissolved inorganic phosphorus [DIP], chlorophyll *a*, sediment contaminants, sediment toxicity, and sediment TOC), when available, is also presented throughout the report according to the rating criteria presented in Table ES-3. The five indicators were assigned a good, fair, or poor rating for each coastal region of the United States. These ratings were then averaged to create an overall score for each coastal area.



**Figure ES-3.** The overall condition for the nation is fair.

**Table ES-3.** Indicators Used to Assess Coastal Condition (NCA)

<b>Water Quality Index</b> is an index that is based on five water quality measurements (dissolved oxygen, nitrogen, phosphorus, chlorophyll <i>a</i> , and water clarity).	
<b>Ecological Condition by Site</b>	<b>Ranking by Region</b>
<p><b>Good:</b> No measures are rated poor, and a maximum of 1 is rated fair.</p> <p><b>Fair:</b> One measure is rated poor, or 2 or more measures are fair.</p> <p><b>Poor:</b> Two or more measures are rated poor.</p>	<p><b>Good:</b> Less than 10% of coastal waters are in poor condition, <b>and</b> less than 50% of coastal waters are in combined poor and fair condition.</p> <p><b>Fair:</b> Between 10% and 20% of coastal waters are in poor condition, <b>or</b> more than 50% of coastal waters are in combined fair and poor condition.</p> <p><b>Poor:</b> More than 20% of coastal waters are in poor condition.</p>
<b>Sediment Quality Index</b> is an index that is based on three sediment quality measurements (sediment contaminants, sediment toxicity, and sediment TOC).	
<b>Ecological Condition by Site</b>	<b>Ranking by Region</b>
<p><b>Good:</b> No measures are rated poor, and the sediment contaminants indicator is rated good.</p> <p><b>Fair:</b> No measures are rated poor, and the sediment contaminants indicator is rated fair.</p> <p><b>Poor:</b> One or more measures are rated poor.</p>	<p><b>Good:</b> Less than 5% of coastal sediments are in poor condition, <b>and</b> less than 50% of coastal sediments are in combined poor and fair condition.</p> <p><b>Fair:</b> Between 5 and 15% of coastal sediments are in poor condition, <b>or</b> more than 50% of coastal sediments are in combined poor and fair condition.</p> <p><b>Poor:</b> More than 15% of coastal sediments are in poor condition.</p>

(continued)



Table ES-3. (continued)

<b>Benthic Index</b> (or a surrogate measure) is an indicator of the condition of the benthic community (organisms living in estuarine sediments) and can include measures of benthic community diversity, the presence and abundance of pollution-tolerant species, and the presence and abundance of pollution-sensitive species.	
Ecological Condition by Site	Ranking by Region
<b>Good, fair, and poor</b> were determined using regionally dependant benthic index scores.	<p><b>Good:</b> Less than 10% of coastal sediments have a poor benthic index score, <b>and</b> less than 50% of coastal sediments have a combined poor and fair benthic index score.</p> <p><b>Fair:</b> Between 10% and 20% of coastal sediments have a poor benthic index score, <b>or</b> more than 50% of coastal sediments have a combined poor and fair benthic index score.</p> <p><b>Poor:</b> More than 20% of coastal sediments have a poor benthic index score.</p>
<b>Coastal Habitat Index</b> is evaluated using the data from the NWI (NWI, 2002). The NWI contains data on estuarine emergent and tidal flat acreage for all coastal states (except Hawaii and Puerto Rico) for 1780 through 2000.	
Ecological Condition by Site	Ranking by Region
The average of the mean long-term, decadal wetland loss rate (1780–1990) and the present decadal wetland loss rate (1990–2000) was determined for each region of the United States and multiplied by 100 to create a coastal habitat index score.	<p><b>Good:</b> The coastal habitat index score is less than 1.0.</p> <p><b>Fair:</b> The coastal habitat index is between 1.0 and 1.25.</p> <p><b>Poor:</b> The coastal habitat index is greater than 1.25.</p>
<b>Fish Tissue Contaminants Index</b> concentrations are an indication of the body burden of target fish/shellfish species.	
Ecological Condition by Site	Ranking by Region
<p><b>Good:</b> Composite fish tissue contaminant concentrations are below the EPA Guidance concentration range.</p> <p><b>Fair:</b> Composite fish tissue contaminant concentrations are in the EPA Guidance concentration range.</p> <p><b>Poor:</b> Composite fish tissue contaminant concentrations are above the EPA Guidance concentration range.</p>	<p><b>Good:</b> Less than 10% of estuarine sites are in poor condition, <b>and</b> less than 50% are in combined fair and poor condition.</p> <p><b>Fair:</b> Between 10 and 20% of estuarine waters are in poor condition, <b>or</b> more than 50% are in combined fair and poor condition.</p> <p><b>Poor:</b> More than 25% of sites have poor condition.</p>

A summary of each indicator is presented below.

**Water Quality Index**—This index is rated fair throughout the United States, although a slightly larger proportion of waters in Northeast Coast estuaries are in poor condition (19%), resulting in a rating of fair to poor.

**Sediment Quality Index**—This index is rated fair to poor for the United States. Sediment quality is poor for the Northeast Coast, Great Lakes, and Puerto Rico. Sediment quality in the remainder of the country's estuarine waters is in fair condition. Many regions of the United States have significant sediment degradation, including contaminant concentrations of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), pesticides, and metals that are above guidance levels. Most of these exceedances occur in Northeast Coast and Puerto Rico estuaries. High concentrations of sediment TOC (often associated with the deposition of human, animal, and plant wastes) are observed in 44% of Puerto Rico estuaries.

**Benthic Index**—Benthic condition is fair to poor in most of the United States. Poor condition is observed in Northeast Coast and Puerto Rico estuaries largely as a result of degraded sediment quality, but in some cases, it is associated with poor water quality conditions, low dissolved oxygen, and elevated nutrient concentrations.

**Coastal Habitat Index**—This index is rated poor. Coastal wetland losses from 1780 to 2000 were greater than or equal to 1% per decade in each region. The index score was greater than 1.25 in coastal wetland areas of the West Coast and the Gulf of Mexico.

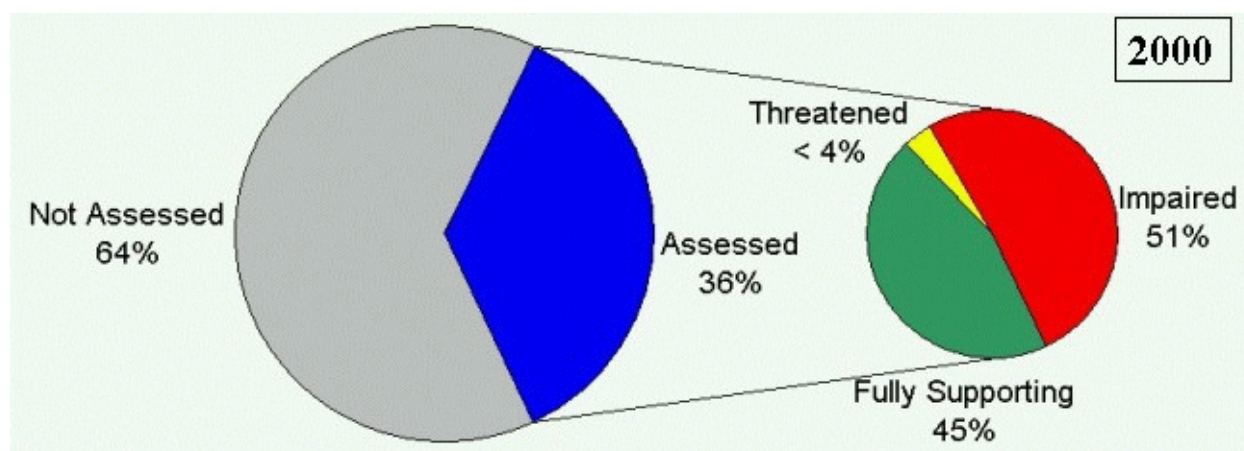
**Fish Tissue Contaminants Index**—The overall rating for fish tissue contaminants for the nation is fair. Fish tissue contaminant concentrations are above guidance levels in fish captured in Northeast Coast and West Coast estuaries for 4 of the 75 contaminants measured (total PCBs, total PAHs, total DDT and mercury). Projections of mercury concentrations in fillets based on whole-body concentrations showed mercury concentrations in fillets are likely to exceed guidance levels for about 42% of sites in the United States. Fish tissue contaminant concentrations were not available for estuaries in Puerto Rico, Florida, and Louisiana.

## **Offshore Fisheries**

Currently, the only comprehensive, nationally consistent data on the condition of offshore coastal waters are fisheries resource data from NOAA surveys. In 2001, NOAA's Office of Sustainable Fisheries reported on the status of 595 marine fish and shellfish stocks out of 951 total stocks (NMFS, 2002). Eighty-one stocks were overfished (compared with 92 in 2000), and 67 of these (83%) were steadily rebuilding. Twenty more stocks had sustainable harvest rates in 2001 than did in 2000. Sixty-five stocks experienced catches exceeding allowable harvest levels. The National Marine Fisheries Service (NMFS) has approved rebuilding plans for the majority of overfished stocks. Of the 81 stocks that are overfished, 67 have an approved rebuilding plan and 9 have plans under development.

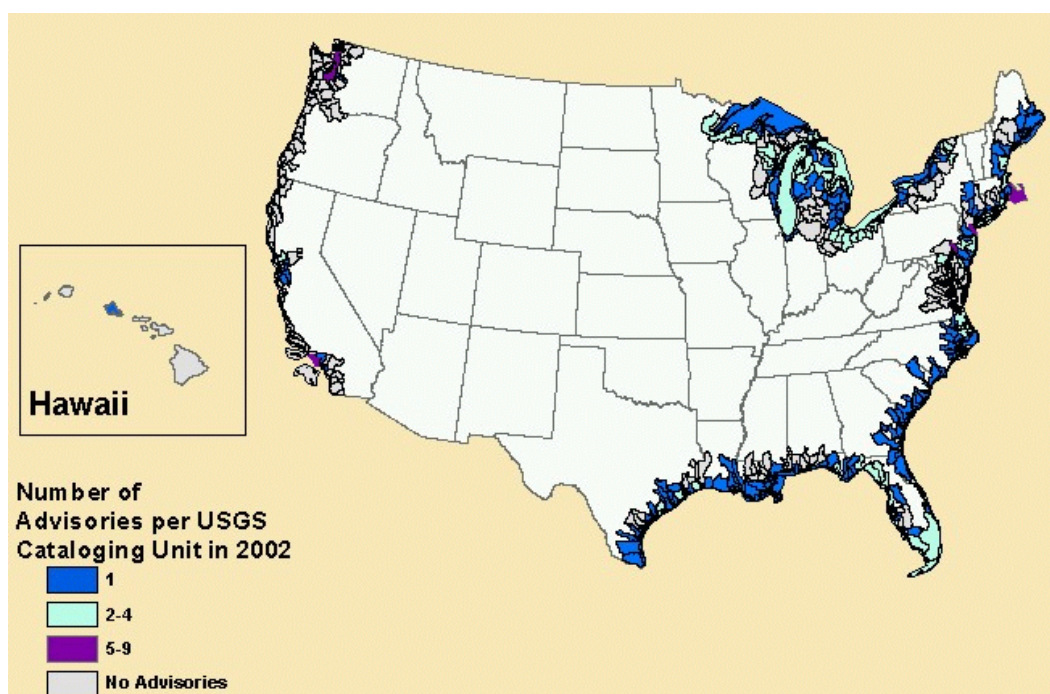
## Assessments and Advisories

Assessment information from the Clean Water Act Section 305(b) is available for 36% of the nation's estuaries and 6% of the nation's shoreline waters. Available information suggests that 51% of assessed estuaries and 14% of assessed coastal shoreline in the United States (excluding Alaska) are impaired by some form of pollution or habitat degradation (Figure ES-4). This information is consistent with the national coastal monitoring data presented in this report. States and tribes rate water quality for Clean Water Act reporting by comparing available water quality data to their water quality standards (water quality standards include narrative and numeric criteria that support specific designated uses, such as swimming and aquatic life use). Each state has different monitoring resources and uses a different methodology for assessment, so this information is not nationally consistent and is often incomplete. Aquatic life support, primary contact recreation (swimming), and fish consumption are the designated uses that were most frequently impaired. The leading stressors resulting in these impairments are metals, pesticides, oxygen-depleting substances (oxygen is consumed during the degradation of organic matter and the oxidation of some inorganic matter), toxic chemicals, PCBs, and dissolved solids.



**Figure ES-4.** 2000 305(b) water quality assessment data for estuaries.

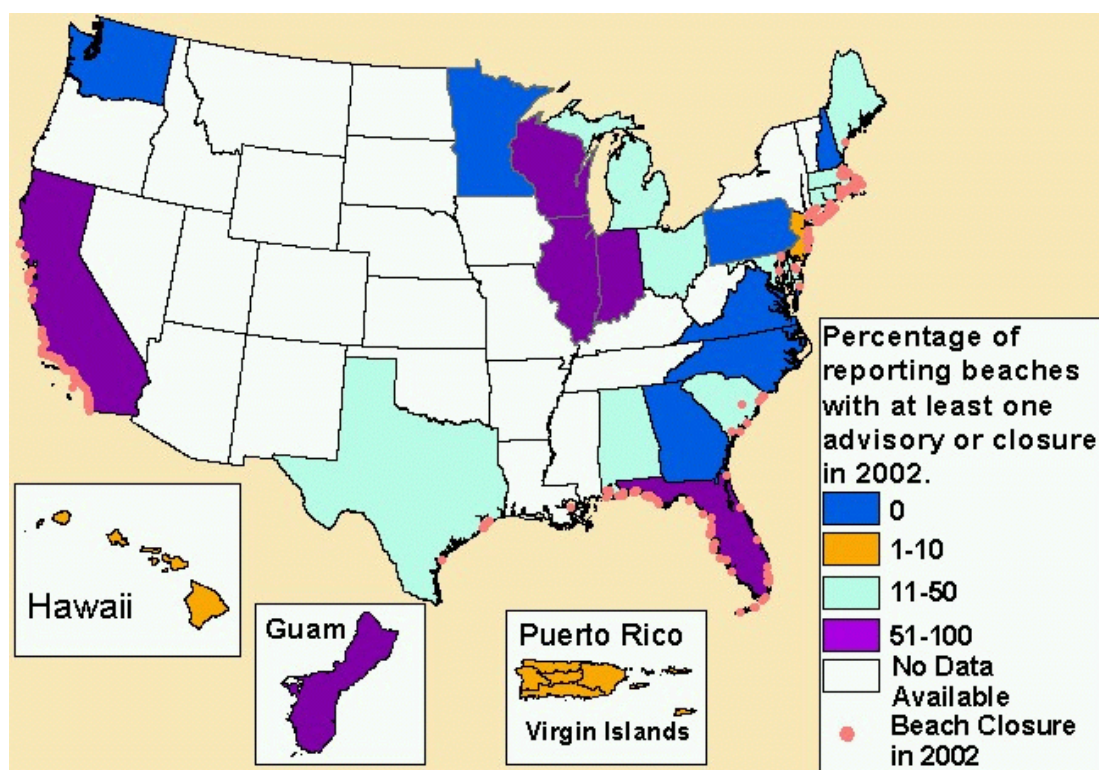
The number of coastal and estuarine waters under fish consumption advisories represent an estimated 74% of the coastline miles of the United States, including 92% of East Coast, 100% of Gulf Coast, and 11% of West Coast coastline miles. An estimated 50% of the estuarine square miles also are under advisory, including 78% of East Coast estuaries, 23% of Gulf Coast estuaries, and 20% of West Coast estuaries (Figure ES-5). Every Great Lake is under at least one advisory, and advisories covered 100% of the Great Lakes shoreline.



**Figure ES-5.** The number of coastal and estuarine fish consumption advisories per USGS cataloging unit. This count does not include advisories that may exist for noncoastal or nonestuarine waters. Alaska did not report advisories (U.S. EPA NLFWA, 2002).



EPA's review of coastal beaches (U.S. coastal areas, estuaries, and the Great Lakes) showed that of the 1,813 marine or Great Lakes beaches responding to the survey, 529 beaches, or 29%, had an advisory or closing in effect at least once during 2002 (Figure ES-6). Beach closures were issued for various reasons, including sewage contamination, elevated bacterial levels, and preemptive reasons. The major sources of contamination were stormwater runoff, sewerline problems, sewer overflows, and in many cases, unknown causes.



**Figure ES-6.** Percentage of marine and Great Lakes beaches responding to the survey with at least one advisory or closure in 2002 (U.S. EPA 2003).

## Shortcomings of Available Data

This report focuses on coastal regions for which nationally consistent and comparable data are available. Such data are currently available only for the conterminous 48 states and Puerto Rico. Alaska has very little information to support the kind of analysis used in this report (i.e., spatial estimates of condition based on indicators measured consistently across broad regions). Nearly 75% of the area of all the bays, sounds, and estuaries in the United States is located in Alaska, and no national report on estuarine condition can be truly complete without information on the condition of living resources and use attainment of these waters. Similarly, little information is available for Hawaii, the Caribbean, or the Pacific territories to support estimates of conditions based on the indicators used in this report. Although these latter systems make up only a small portion of the nation's estuarine area, they do represent a set of estuarine subsystems (such as coral reefs and tropical bays) that are not located anywhere else in the United States with the exception of the Florida Keys and the Flower Gardens off the Louisiana/Texas coast. These unique systems should not be excluded from future national

assessments, and initial condition surveys have already been completed for monitoring programs in Hawaii and portions of Alaska.

This report tries to make the best use of available data in order to characterize and assess the condition of the nation's estuarine resources; however, the report cannot represent all individual estuarine systems of the United States or all of the appropriate spatial scales (national, regional, and local) necessary to assess the condition of estuaries. This assessment is based on a limited number of ecological indicators for which consistent data sets are available to support estimates of ecological condition on regional and national scales. Through a multiagency and multistate effort over the continuing decade, a truly consistent, comprehensive, and integrated national coastal monitoring program can be realized. Only through the cooperative interaction of the key federal agencies and coastal states will the next effort to gauge the health of the coastal ecosystems in the United States be successful.

Although most of the chapters in the report use ecological indicators to address the condition of coastal resources in each region, the last chapter addresses coastal condition in the context of how well estuaries are meeting the uses that humans expect of them. Only one estuary, Galveston Bay, was considered. In this case, it appears that human uses for commerce, fishing, and recreation are being met. The exception is that fish consumption advisories are required at the upper end of the bay near Houston.

## **Comparisons to the First National Coastal Condition Report**

A primary goal of the National Coastal Condition Reports is to provide a benchmark of coastal condition in order to measure the success of coastal programs over time. To achieve this end, the conditions reported in each report need to be comparable. For the first two reports (NCCR I and NCCR II), there is insufficient information to examine the potential trends in estuarine condition that might be related to changes in environmental programs and policies. In the next report (anticipated in 2006), the information from 1990 through 2002 will be evaluated for potential trends.

Comparing data between the NCCR I and NCCR II is complicated because, in some cases, indicators were changed in order to improve the assessment. For example, in the first report, seven indicators were used, including multiple indicators for water quality, where a single water quality indicator is used in this report. In addition, reference conditions for some of the indicators were modified to reflect regional differences. In order to facilitate a comparison, the values reported in the NCCR I executive summary were recalculated using the approaches followed in this report, to the extent possible, and are shown in Table ES-4. The table shows that overall condition in U.S. estuaries appears to have improved. A more detailed comparison of the results reported in the two reports appears in Appendix B.

**Table ES-4.** Rating Scores<sup>a</sup> by Indicator and Region Comparing the 2001 and 2003 National Coastal Condition Reports but Calculated with 2003 Methods.

Indicator	Northeast Coast		Southeast Coast		Gulf Coast		West Coast		Great Lakes		Puerto Rico		United States <sup>b</sup>	
	v1 <sup>c</sup>	v2 <sup>c</sup>	v1	v2	v1	v2	v1	v2	v1	v2	v1	v2	v1	v2
Water quality index	1	2	4	4	1	3	1	3	1	3	---	3	1.5	3.0
Sediment quality index	2	1	4	4	3	3	2	2	1	1	--	1	2.3	2.1
Coastal habitat index	3	4	2	3	1	1	1	1	1	2	--	— <sup>d</sup>	1.6	1.7
Benthic index	1	1	3	3	1	2	3	3	1	2	---	1	1.5	2.0
Fish tissue contaminants index	2	1	5	5	3	3	3	1	3	3	---	---	3.1	2.7
Overall condition	1.8	1.8	3.6	3.8	1.8	2.4	2.0	2.0	1.4	2.2	---	1.7	2.0	2.3

<sup>a</sup> Rating scores are based on a 5-point system where 1 is poor and 5 is good (scores for Puerto Rico are only available for 2003 report).

<sup>b</sup> U.S. score is based on an areally weighted mean of regional scores.

<sup>c</sup> v1 = NCCR I, v2 = NCCR II

<sup>d</sup> No coastal habitat index or fish tissue contaminants index results are available for Puerto Rico.